



# Lake Erie Harmful Algal Bloom Bulletin

19 July, 2018, Bulletin 09

## Analysis

The *Microcystis* cyanobacteria bloom continues in the western basin. Recent satellite imagery (7/17) indicates the bloom is present in Maumee Bay, extending north alongshore the Michigan coast to Brest Bay and 9.5 miles offshore from Otter Creek. Measured toxin concentrations are increasing and detectable at most sample sites, but still below the recreational threshold throughout most of the bloom extent. Concentrations can exceed this threshold in the western extent of the bloom where it is most dense (appearing green from a boat). *Keep pets and yourself out of the water in areas where scum is forming*. Winds observed since Monday created the potential for mixing of surface *Microcystis* concentrations. The cyanobacteria bloom in Sandusky Bay persists at the mouth of Sandusky Bay. The cyanobacteria bloom in the central basin caused by *Dolichospermum* is not currently visible in satellite imagery (7/17-18). This bloom is different from the western basin bloom, and in past years has lasted only a few weeks.

## Forecasts

Forecast winds (6-18 kn) today through Thursday (7/19-23) will promote mixing of surface waters and an overall northeastward transport of surface *Microcystis* concentrations. —Keeney, Ludema

## Additional Resources

To find a safe place for recreation, visit the Ohio DOH "BeachGuard" site: <http://publicapps.odh.ohio.gov/beachguardpublic/>

Ohio EPA's site on harmful algal blooms: <http://epa.ohio.gov/HAB-Algae>

NOAA's GLERL provides additional HAB data here: [http://www.glerl.noaa.gov/res/HABs\\_and\\_Hypoxia](http://www.glerl.noaa.gov/res/HABs_and_Hypoxia)

The images below are "GeoPDF". Please visit <https://go.usa.gov/xReTC> for instructions on viewing longitude and latitude.



Figure 1. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 July, 2018 at 11:31 EST. Grey indicates clouds or missing data. The estimated threshold for cyanobacteria detection is 20,000 cells/mL

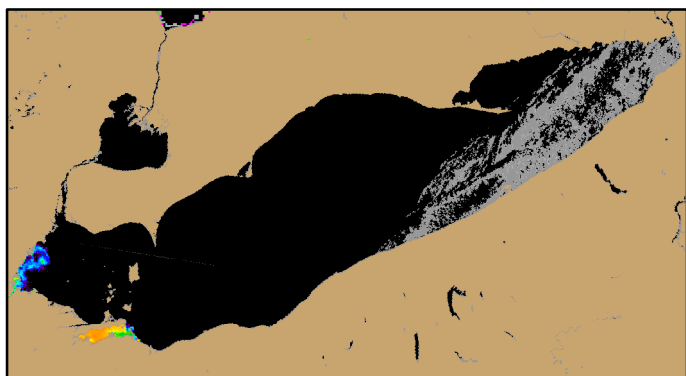
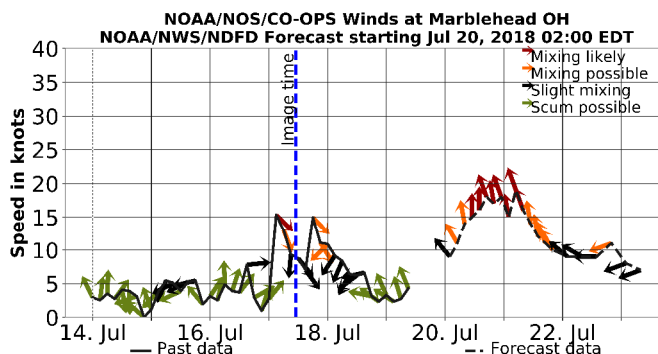


Figure 2. Cyanobacterial Index from modified Copernicus Sentinel 3 data collected 17 July, 2018 at 11:31.



Wind speed and direction from Marblehead, OH. Blooms mix through the water column at wind speeds greater than 15 knots (or 7.7 m/s).

For more information and to subscribe to this bulletin, go to: <https://tidesandcurrents.noaa.gov/hab/lakeerie.html>

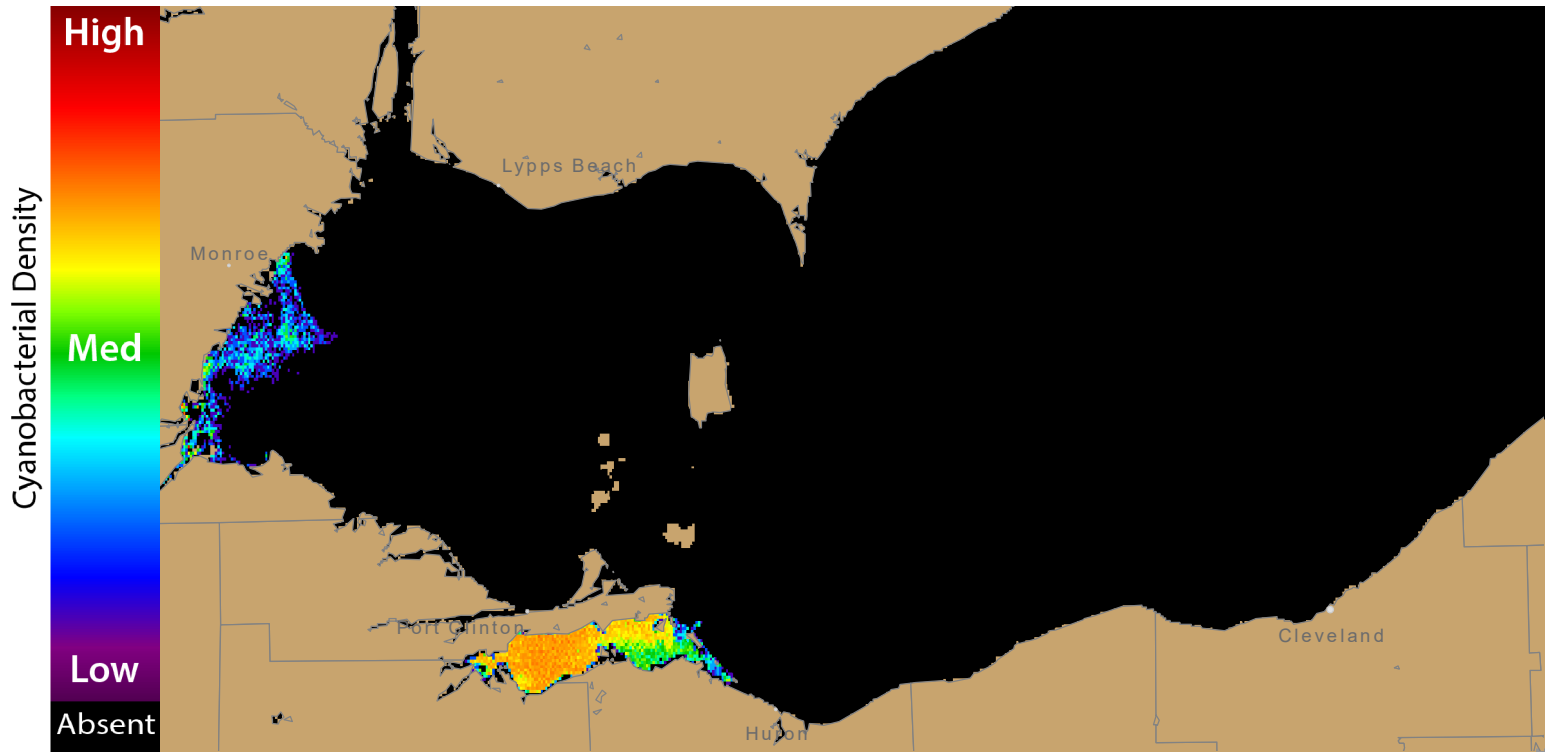


Figure 3. Nowcast position of bloom for 19 July, 2018 using LEOFS modelled currents to move the bloom from the 17 July, 2018 image.

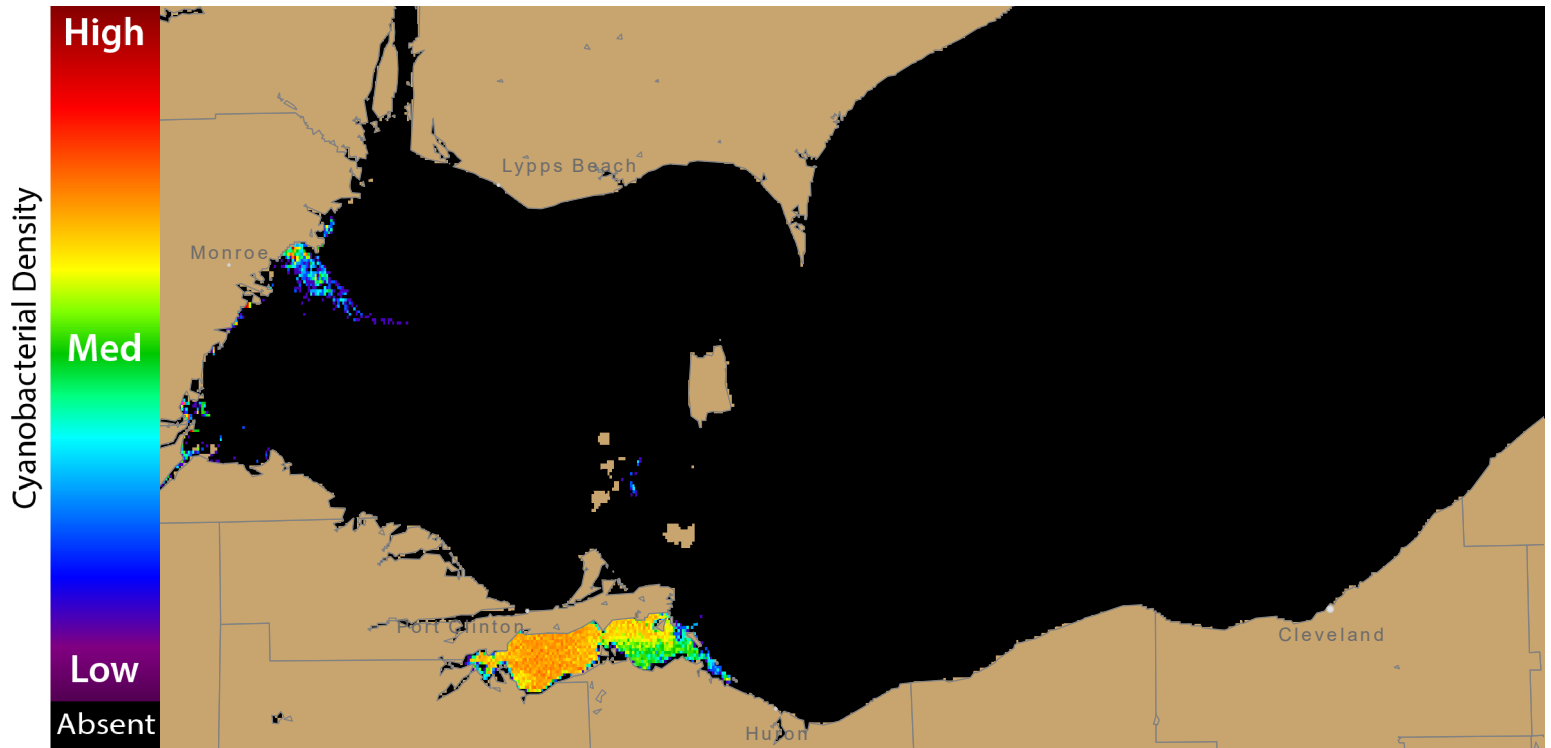
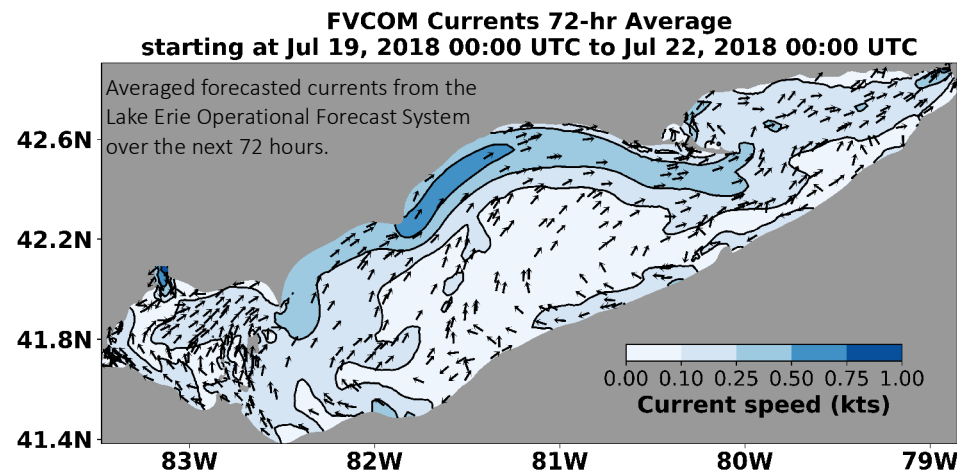


Figure 4. Forecast position of bloom for 22 July, 2018 using LEOFS modelled currents to move the bloom from the 17 July, 2018 image.



For more information and to subscribe, please visit the NOAA HAB Forecast page:  
<https://tidesandcurrents.noaa.gov/hab/lakeerie.html>